

ABSTRACT

A hydroconversion catalyst for hydrodesulfurizing feedstock while preserving octane number of the feedstock includes a support having a mixture of zeolite and alumina, the zeolite having an Si/Al ratio of between about 1 and about 20, and an active phase on the support and including a first metal selected from group 6 of the periodic table of elements, a second metal selected from the group consisting of group 8, group 9 and group 10 of the periodic table of elements and a third element selected from group 15 of the periodic table of elements. A hydroconversion process is also disclosed.